PART D GUIDELINES FOR LONG-RANGE FACILITIES/INFRASTRUCTURE MASTER PLANNING

1.00 Scope of a Long-Range Facilities/Infrastructure Master Plan

The validity of a planning document is dependent on the integration of an institution's academic, facility, infrastructure and information technology goals. Information incorporated should be up-to-date and reflect an assessment of a governing board's vision for a particular institution.

Title 23-1-106 (3) directs the commission to "review and approve master planning and program planning for all capital construction projects of institutions of higher education" and to ensure that the facilities master plan (23-1-106 (4) C.R.S.) conforms to "approved educational master plans." Any facilities/infrastructure plan must be driven in large part by the academic course set for a particular institution and therefore must incorporate those academic goals.

The following outline presents the basic contents of a comprehensive long-range facilities master plan. Such a plan is divided into two distinct sections -- Institutional Data and the Facilities/Infrastructure plan. Since educational facilities exist to serve educational need, it is logical that much data about the institution must be assembled before planning infrastructure and facilities for the campus.

I. Institutional Data

- A. General
 - 1. Role
 - 2. History
 - 3. Relationships
 - a. state system for higher education
 - b. community or service area
 - c. governing board

B. Service Area

- 1. Geographic
 - a. boundaries
 - b. characteristics
- 2. History
- 3. Population--present and projected
 - a. size
 - b. racial characteristics
 - c. socio-economic characteristics

- 4. Economic basis
- 5. Climate (temperature ranges, precipitation, etc.)
- 6. Transportation systems
- 7. Education
 - a. Role and mission, students' service needs
 - b. Systems existing (public and private)
 - c. Academic plan and its implications for facility planning
 - d. Assessment of strategic academic vision within institutional role and mission
- 8. Description of satellite* campuses
 - a. Enrollment—FTE and Headcount
 - b. Programs Offered
 - c. Locations
 - *Satellite campuses are those other than the main campus.

C. Policies

- 1. Admissions
- 2. Community programs
- 3. Ancillary programs
- 4. Housing
- 5. Student services
- 6. Automobile use and storage
- 7. Athletics
- 8. Class and laboratory scheduling
- 9. Maintenance of existing facilities
- D. Enrollment Size and Distribution Data (Current and Phased Growth)
 - 1. Basic enrollment
 - 2. Enrollment distribution by organizational unit (generally college unit)
 - 3. Student residence demographic data
 - 4. Impact of distance education on enrollment
- E. Faculty and Staff Size and Distribution Data (Current 6-year Growth)
 - 1. By functional area
 - 2. By organizational unit
- F. Curriculum and Student Load Projections for plan life
 - 1. Student-credit projections by organizational unit
 - 2. Contact-hour projections by organizational unit and course
- G. Building Space Projections by Functional Use Classification and Phased Enrollment
 - 1. Resident Instruction

- a. Classroom and classroom service space
- b. Instructional laboratories and service space
- c. Physical education facilities and service space
- d. Other teaching facilities and service space
- e. Instructional faculty offices and related secretarial, clerical, and office service space
- f. Other instructional space
- 2. Organized activities related to instruction
- 3. Research
 - a. Research faculty offices and related secretarial, clerical and office service space
 - b. Other research space
- 4. Extension and Public Service
 - a. Office space
 - b. Other extension and public service space
- 5. Library
- 6. Administration and General
 - a. Office space
 - b. Other administration and general space
- 7. Physical plant service
- 8. Auxiliary enterprises
- 9. Non-institutional agencies
- H. Outdoor Site Facilities Projections by Functional Use
 - 1. Physical education/Academic
 - 2. Recreation
 - 3. Intercollegiate athletics
 - 4. Physical plant
 - 5. Automobile parking
 - 6. Other
- I. Inventory of Existing Facilities
 - 1. Campus site
 - a. location
 - 1) in service area
 - 2) in community
 - b. environs
 - 1) land use, zoning
 - 2) access via transportation networks
 - 3) visual
 - c. boundaries (if specific service area defined)
 - d. number of acres
 - e. topography
 - f. subsurface soils conditions

- g. building locations¹
- h. circulation systems¹
- i. utility systems¹ (including technology infrastructure)
- j. outdoor site facilities
- 2. Building data by functional use classification¹
 - a. physical inventory list, including brief description, age of building and State Buildings Condition Index
 - b. space inventory by functional use classification, room type, and organizational unit
- J. Information technology infrastructure summary and its impact on facility needs, including incorporation of distance learning and an assessment of its impact on infrastructure and facility needs
- K. Recommended Use or Removal of Existing Facilities
- L. Recommended Renovation of Facilities
- M. Recommended Construction of New Facilities
- N. Conclusions about the direction of facilities planning based on the institutional data submitted
- II. Facilities Master Plan
 - A. Planning Concepts
 - 1. Ideal functional diagrams
 - a. nature and relationships of land zones
 - b. functional relationships within land-use zones
 - c. utilizing the topography
 - d. utilizing the subsurface soils conditions
 - e. flexibility for growth
 - 2. Land coverage decisions
 - a. building density (height and land coverage) with building zones
 - b. parking facilities
 - 1) surface
 - 2) structures
 - B. Campus Plans and Supporting Data
 - 1. Land perimeter
 - 2. Land use
 - 3. Circulation systems and Vehicle Storage
 - 4. Utility systems, including technology infrastructure

¹Generally not required when planning new institutions.

- 5. Building location
- 6. Topography
- 7. Facility staging plan
- C. Facilities Construction and Renovation Time Schedule
- D. Facilities Construction and Renovation Economic Studies and Project Cost Estimates

E. Summary

A rolling five-year projection of capital improvement projects is required by 23-1-106 (6), which requires each governing board to submit a unified list that includes all capital projects anticipated, regardless of funding source, the estimated cost, funding source(s), schedule for completion and the governing board priority for each project listed.

III. Appendix

2.00 Publication of a Long-Range Facilities, Infrastructure Master Plan

Since each institution of higher education is statutorily required to complete both a facility and academic master plan (23-1-106 (4) C.R.S.) the format of the final plan should be standardized generally using these guidelines.

The final report should be developed for wide distribution. It should contain all the basic master plan data including summary tables taken from the working papers. This book should be considered a presentation document and should be designed and printed in a well-organized and usable manner. It should reference in the preface all information constituting the working papers.

The working papers should be provided electronically if possible as the supporting documentation or appendices to the final report. These papers will be made up of the detailed computations and tables primarily related to the following:

Student-credit production Contact-hour computations New building space computations Inventory of existing facilities

(where possible electronic transmission of this data is preferred and may be transmitted via writable CD-ROM)

3.00 Approvals of Long-Range Facilities, Infrastructure Plans

During the preparation of the long-range plan elements, informal review sessions are available with staff at the request of the institution to review any plan element.

These information reviews will permit planning to be coordinated between the institutional governing board and the commission and will assist in final review of the strategic academic, facility and technology decision-making that serve as the foundation of the plan.

The final published document must have the following formal approvals in this order before becoming official:

- Institution
- Governing Board
- Commission on Higher Education

Formal approval of the facility master plan will not be scheduled before the commission until the plan has been approved at both the institutional and governing board levels, although a plan may be submitted pending those approvals so staff review may begin.

4.00 Periodic Updating of a Long-Range Plan

A long-range plan must be developed as a flexible framework for campus growth. Its concept must recognize the dynamic nature of education. As enrollments grow or decline and/or as academic programs change or become more comprehensive to serve new student needs it is inevitable that campus needs will change. The plan must be capable of meeting these changing circumstances. Thus, every six years the long-range plan for each campus must be updated in order to keep it current. Minor changes that are necessary between major revisions may be accommodated through amendment. Each amendment must receive the approval of the entities enumerated above.

5.00 Relation to Statewide Plan

The institutional master plan should relate to and be compatible with the Colorado Statewide Master Plan for Postsecondary Education. If the institution should desire to deviate in any way from provisions contained in the state plan, concurrence should be obtained from the Commission at an early point in the institutional master planning effort.

6.00 Institutional Data

It is necessary for an institution to assess its present and future mission, programs, and goals prior to making any attempt to create a facility and infrastructure plan that incorporates technology needs. Facilities and infrastructure must <u>serve</u> the program needs of the institution. Thus, it is necessary to generate much institutional data at the beginning of the planning process. As the full range of planning activities is carried out, revisions in these data no doubt will be made. Comprehensive planning should be an interactive process and no data should be prepared which cannot be changed after further analytical work in other areas is carried out. Gathering institutional data is not sufficient. Conclusions about the institutional data should be incorporated. These conclusions will guide the other major plan elements.

7.00 Tables

Much of the institutional data are to be compiled and presented in a series of tables within the working papers segment of the plan. Institutions are encouraged to incorporate all related information concerning organizational unit planning in an electronic appendix. Examples of these tables are available on request, or an institution may choose its own model, providing the modeling assumptions as part of its submission.

8.00 Planning Criteria

Presented in Part F are detailed planning criteria to be utilized in the planning process. These criteria are not all together complete and, in some instances, might not exactly "fit" all institutions.

9.00 Campus Population

Campus population -- along with educational programs and institutional policies -- is a powerful force in campus growth. The base population of a campus is the sum of the number of students, faculty, staff, and visitors. This section of the guidelines is directed toward projecting the elements of campus population.

10.00 Academic Planning & Information Technology

Information technology is a powerful force as institutions develop on-line courses and degree programs as well as integration of technology in more traditional instructional courses.

State-supported institutions submit annual updates of academic initiatives to CCHE (Policy I-O-1). Each facility/infrastructure master plan should therefore incorporate the academic update and an assessment of how its distance learning objectives impact the facility/infrastructure master planning.

In some instances, information technology decisions may reduce the need for new physical facilities because of the potential for students to access classes via the internet or other distance education media. Linkages among academic, information technology, and facility planning should be thoroughly discussed in the master plans. As academic updates and information technology strategic decisions are revised and approved, the updates will be included in the most current facilities/infrastructure master plan.

11.00 Enrollment

The first enrollment projection interval of the facilities master plan, Phase 1, should outline the expected enrollment over the three years following the year of the master planning study. The succeeding interval, Phase 2, should be the next three years. The enrollment projection should take into account (a) the size of the institution, (b) the expected growth of the institution, and (c) the impact of distance education.

Sample tables or models are available on request.

12.00 Faculty and Staff

Institutions should present summary data on faculty and staff projections. The information should be supplemented with appropriate descriptive material that will explain the institution's exact methodology employed in making the projections. The CCHE budget recommendations contain a great many statistics on college and university staffing which are useful for planning purposes and may be useful for base information. Sample data tables are available on request.

13.00 Visitors

While definitive projections of the number of visitors who can be expected on a campus are hardly feasible, the matter is of consequence and deserves more than passing consideration. Provisions must be made for routine day-to-day visitors who will need parking facilities, information centers, waiting areas, etc. Athletics events, performing arts, etc., will all contribute to this area of facility demand.

14.00 Building Space Projections--Total

The assignable area in square feet (ASF) of building space needed on a campus may be determined based upon the number of people to occupy the facility and the functions which they undertake while there. Assignable area may then be converted to gross area in square feet (GSF) through the use of appropriate conversion factors (See Part F).

Building space needs for the various structures on a campus at the two growth phases are an essential element of the long-range campus master plan.

15.00 New Campuses

Unless new campuses make use of existing facilities for the purposes of the institution, the projection of building space involves the consideration of new facilities only. In that instance, it is necessary to make use of the data in this section of the guidelines without consideration of the effects of continued use of existing building space.

16.00 Campuses with Existing Facilities

On existing campuses, or new campuses that will make use of some existing buildings, the procedure for determining the construction of new building space and the use of existing building space is more complex. In this instance, the following steps are logical:

A. Building Space Projections

Total building space needs must be projected at the two phases of campus growth. Procedures for making these projections are described in this section of the guidelines.

B. Inventory of Existing Facilities

An inventory must be made describing all existing facilities, regardless of funding source, establishing their present use and condition, as well as stating their appropriateness for continued use and life expectancy.

C. Use of Existing Facilities

Prior to recommending construction of new facilities, appropriate steps must be taken to assure the <u>highest possible</u> effective utilization of existing facilities with due consideration of operating costs. Greater utilization of capital resources should not be planned if inordinately high operating inefficiencies result. Utilization through Phase 1 should be projected in greater detail. For Phase 2, a more generalized approach should be taken. If it is possible to ascertain that certain facilities will be removed beyond Phase 1 development, this information should be incorporated in the plan. Renovating and remodeling existing facilities should be the preferred option over building new facilities when doing so is less costly in the long term than building new facilities.

D. Construction of New Facilities

After space provided in existing facilities is deducted from total space needs at the two enrollment growth phases, the remainder of space needs may be met through the construction of new buildings. Extending the hours and days of week classes and laboratories are taught should be explored before new instructional facilities are proposed. Substantial institutional attainment of CCHE space utilization guidelines outlined in Part F should be the goal before new facilities are proposed. If CCHE space utilization guidelines cannot be met, an institution should present a rationale for constructing new facilities.

17.00 Building Space Projection Categories

Space projections shall be grouped into the following categories:

- A. Resident Instruction
 - 1. Classroom and classroom service space
 - 2. Instructional laboratories and service space
 - 3. Physical education facilities and service space
 - 4. Other teaching facilities and service space
 - 5. Instructional faculty offices and related secretarial, clerical, and office service space
 - 6. Other instructional space
- B. Organized activities related to instruction
- C. Research (if relevant)
 - 1. Research faculty offices and related secretarial, clerical, and office service space
 - 2. Other research space
- D. Extension and Public Service (where relevant)
 - 1. Office space
 - 2. Other extension and public service space
- E. Library (including related technology planning)
- F. Administration and General
 - 1. Office space
 - 2. Other administration and general space
- G. Physical plant service
- H. Auxiliary enterprises (where relevant)

I. Non-institutional agencies (where relevant)

Various space standards and criteria relating to the above are presented in Part F. These standards should be followed wherever appropriate and any deviation from them should be justified in the planning documents.

18.00 Instructional Spaces

Projection of needs for instructional spaces at Phase 1 of campus growth (three years from present), or at Phase 2 (three years later) shall be based upon highly detailed data involving specific curriculum content, etc. Space projections of the three-year (Phase 1) data as related to enrollment growth are adjusted to reflect predictable changes in space utilization as the size of the student body changes.

An estimate of the complete fall term (semester or quarter) curriculum at Phase 1 shall be made assigning credit-hour values to each course and estimating course enrollments. The total student-credit-hour production for the institution should yield FTE student numbers that concur with those projected. In some institutions, day enrollments in relation to day hours available will exceed evening enrollment loads in relation to evening hours available. In other institutions, evening enrollments may be greater in relation to evening hours available than daytime enrollments are to daytime hours available and may become the basis for the programming of some or all instructional space needs. Institutions should review these issues with staff as planning proceeds and make appropriate adjustments.

"Present year" data should be presented in a similar way for comparability.

Credit hours for each course should be converted to contact hours, and the room-contact hours per week established. (Institutions may use sample CCHE tables or an alternative.)

Room-contact hours for all sections are converted to the number of rooms required for each room type. Then, using appropriate standards, the size of each room is computed. (Sample tables are available on request.)

As has been pointed out previously, projections for Phase 1 development should be more detailed, whereas a more generalized approach can be taken for Phase 2. Phase 1 projections may be used as a basis for calculating average assignable square feet per full-time equivalent student in various space categories (or similar averages) and the averages then applied to projected FTE students.

Institutions should show projections of faculty and staff office space needs. Data presented should be based on projections of faculty and staff for resident instruction and research as presented.

19.00 Research Space

Research institutions should provide projections for meeting the needs for (a) individual work space for faculty/professional research personnel and graduate students engaged in research, including related service space, and (b) space for large-scale specialized equipment and technical services used in supporting research programs.

The institution should outline for the commission the assumptions it makes to calculate research space needs and why it selected those assumptions.

Space requirements for research facilities needing special purpose space should be determined by the nature of the facility.

20.00 Library Space

Projection of library space needs shall be based upon the institution's library collection goals and service delivery strategies, including relevant technology infrastructure and information technology plans such as digitization or electronic storage options. Describe the existing and proposed functions of the campus library information network and the spatial distribution of campus library services. For decentralized library networks, describe the collection and services available at each branch library. The institution should integrate its technology plans with its information storage and access plan for its library services.

The institution's collection development policy should be compatible with the institution role and mission, academic programs, and research programs. It should also provide resources for state-recognized centers of excellence.

The collection development policy should include the following information, as applicable.

- A. Library role and mission statement.
- B. Clientele to be served, both institution and non-institution.
- C. General subject boundaries of the collection.
- D. Academic programs and user needs supported (instruction, research, reference, recreation, etc.).
- E. Library resource selection priorities
 - 1) Collection breadth and depth of subject coverage.
 - 2) Continuing financial support for strong collections.
 - 3) Forms of materials collected or excluded.
 - 4) Languages and geographical areas collected or excluded.
 - 5) Chronological periods collected or excluded.
 - 6) Other exclusions.
 - 7) Duplication of materials.

F. National, regional, and local cooperative collection agreements that complement or otherwise impact the institution's collection development policy.

The size of the institution's library collection is based upon the size of the existing collection plus the institution's net annual acquisition rate (See Section F: Space Planning Criteria for Libraries - Collection Size.)

Describe the historical acquisition trends for the past five years. Note any trends in short-term funding and special funding that have affected past acquisitions. Explain how the proposed annual acquisition rate relates to academic program goals and to governing board operating budget goals.

Discuss the de-selection (weeding) policy for the institution including the management of out-dated materials, damaged materials and multiple copies. Describe the institution's policies for reallocating library resources to respond to new programs, discontinued programs, research efforts and relocation of programs to other campuses.

Discuss the institution's access to non-campus collections and computer databases through contracts, library access agreements and inter-library loan agreements. Describe all information (access, storage, delivery) technology that will be integrated into the library system.

The percentage of student FTE to be provided with study stations is limited to a maximum of 20 percent for community colleges and 25 percent for four-year colleges and universities. (Specialized libraries such as medical and law libraries are not subject to these maximum percentages.)

Document and justify any need for additional study stations required for faculty or community users and describe the methods used to quantify this need.

Space utilization criteria to be used in master planning for library space are included in Part F.

21.00 Other Space

The institution should systematically develop space projections for each area not previously covered and should present those projections in appropriate formats similar to those shown in this section.

22.00 Inventory of Existing Physical Plant

For existing institutions which will continue to occupy part or all of their present facilities or for new institutions intending to convert buildings or other facilities already existing into educational facilities, it is necessary to generate and present a

substantial amount of data about the existing physical plant. These data shall present a comprehensive overview of the entire facilities of the institution, including the amount and nature of its land holdings, the surface and subsurface development of its land, and much information about its buildings. It shall include all facilities which now exist and/or for which construction funds have been provided. Any facilities for which physical planning funds have been appropriated should be included to the depth that available information will permit.

The following data are essential elements of the inventory of existing physical plant:

A. Campus Site or Sites

A diagrammatic map showing the boundaries of the institution's service area and the location of the institution's main campus and other land holdings. Identify whether land holdings are owned, leased, rented, etc.

B. Main Campus or Campuses

A diagrammatic map showing the location of the main campus and other major permanent facilities or campuses in the city or community within which the main campus is located (e.g., at CSU, the Main Campus, the Foothills Campus, and the South Campus; at UNC, the three major campus areas). Include rented facilities (with special identification) if it is anticipated that such rental will be long-term (five years or more).

C. Environs

Diagrammatic maps and written descriptions of the environs of the main campus or campuses including zoning, land use, access networks, visual characteristics, utility systems, etc.

23.00 Main Campus or Campuses

Detailed campus maps and/or written description of the following:

A. Boundaries and Restrictions

Provide a boundaries map based upon current abstracts of all land holdings. Provide accurate information on all such restrictions as easements, rights-of-way, restrictive conditions imposed upon use of lands (i.e., restrictions imposed upon use of land by the donor of the land, etc.).

B. Topography and Drainage

Provide a topographic map or maps of all campus land holdings which are either already developed or will be considered for development within the time span of this master plan. Normally, topography based upon the aerial photography method will be sufficiently accurate but, in special cases, land surveys may be required. In many instances, topography obtained for this facilities inventory will also be suitable for use in the physical planning of actual projects. Any surface drainage problems should be identified and described.

C. Subsurface Soils Conditions

Adequate data must be obtained regarding the ability of subsurface soils conditions of land holdings to accept campus development. This includes the ability of soils to economically support building foundation loads and to be contoured as required. Subsurface water, if any, should be indicated. On raw land, it will probably be necessary to drill an appropriate number of test holes in order to determine subsurface conditions. On developed land, it is likely that investigations and reports already exist and may be used as a basis for a general summary statement.

D. Surface Land Development

Provide a map or maps indicating locations of all surface development including buildings, streets, sidewalks, parking lots, paved courts, fields, general location and type of landscape elements, air or surface utilities, etc. These maps may be combined with topographic maps if desired.

E. Underground Utilities

Provide a map or maps showing size, approximate or actual location, depth, etc., of all underground utilities systems.

24.00 Buildings

A. Key Map

Provide a key map identifying each building by name and the code numbers used in the room inventory.

B. Each Building

For each building shown on the key map, provide the following:

- 1) The facilities condition index.
- 2) A summary of the number of rooms by their functional use code (as defined by the National Center for Education Statistics).
- 3) A general building description, including its description.
- 4) Age of the building.

25.00 Automobile Parking Facilities

When land-use patterns on almost every campus are examined, it becomes evident that the storage of parked automobiles has rapidly become one of the several major functions that consumes campus land.

A. Key Map

Provide a key map identifying each automobile parking facility by type (surface lot, structure, or on-street) and capacity, and code number used in the parking facility inventory forms. On relatively simple campuses, this key map may be combined with the key map for buildings.

B. Each Parking Facility

Provide data for each parking facility indicating whether facility is surface parking, parking garage or on-street space and number of parking spots existing.

26.00 Determining Parking Need

Demand for automobile parking facilities is shaped by many influences -enrollment, policy, physical characteristics of the campus, off-campus provisions,
economic considerations, habits of automobile users, availability of mass transit,
and a number of other things. These influences will vary broadly from campus to
campus.

Generally, parking facilities will be required for students, faculty, staff and visitors. Policy decisions will be required for each category of user.

Analyses of the need (demand) for automobile parking facilities should be based upon information gathered from a series of questions similar to the following:

A. Policy

- 1. Will limitations be imposed upon the use of automobiles by students, faculty, staff and/or visitors? If so, what will they be?
- 2. Will parking fees be charged? If so, what will be their approximate amount by classification of user?²
- 3. Will restrictions be placed upon which parking facility may be used by the several classifications of auto user?
- 4. Will registration of vehicles be required?
- 5. Will curb parking be permitted on the campus street network? If so, will parking be regulated?
- 6. Will curb parking be permitted on the street network surrounding the campus? If so, will parking time be limited?
- 7. For whom and for what types of on-campus activities or functions will visitor parking facilities be provided? Parking demand by visitors can range from limited need at such visitor used buildings as the administration building, union, library, etc., to vast need at spectator facilities for the performing arts, athletic events, and other such affairs.

B. User Preference and Habits

- 1. What proportion of the students, faculty, staff and/or visitors presently drive an automobile for or on the campus? Daily or less frequently? If less than daily, how often?
- 2. How many passengers are there in the car on an average basis?
- 3. How far is the user in each classification willing to walk from his parked automobile to his destination?
- 4. Would the user be willing to pay a parking fee? If this fee were to vary depending upon distance between parking facility to destination, would this affect the selection of the location of the facility used?
- 5. Would the use of mass transit be appealing if the price were considered reasonable? Is mass transit available or likely to be available in the area of the campus?

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²Present policy provides that appropriated state funds will provide for facilities for parking of state-owned vehicles only.

After adequate data related to policy, user preferences and habits have been generated, the number and kinds of parking spaces required to serve the several user categories may be estimated. Such estimates may be made upon a population served basis or by relationship to land uses. For the first method, determine the present ratios of automobiles to campus population and project that factor (weighted if necessary to reflect changing circumstances) over the several phases of enrollment growth. For the second method, determine how many vehicles are generated by each type of campus land use. Estimate future land-use requirements and, in turn, future parking loads. Perhaps, the two methods will be used in combination. Actually, conditions at the various campuses in Colorado vary so widely that a specific forecasting procedure will likely have to be developed for each campus.

27.00 Existing Parking Facilities

Existing parking facilities should be inventoried and evaluated for continued short-term and long-term use and deducted from total demand.

28.00 New Parking Facilities

Having identified quantity of parking spaces for the several user categories, it is necessary to consider the types and location of new parking facilities.

The availability and cost of land will bear heavily upon the type of parking facilities to be constructed. Surface parking lots including paving, curbing, stripes, and lighting may be capable of accommodating only 125 to 140 automobiles per acre. Multi-level parking structures are far more costly to build but can accommodate more vehicles per acre than surface lots. A criterion for deciding whether to build surface lots or multi-level parking structures relates to the ability to finance parking facilities without imposing undue financial strain on the users.

Location of parking facilities should be determined in large measure on the basis of the destination of the driver. Other factors which should be considered are campus policy and many aspects of general campus layout including the pattern of the street network, building location, location of available open land areas, contour of terrain, etc.

When land for parking facilities is simply not available on campus, remote parking lots may be workable using a system of shuttle buses to reach the campus.

29.00 Student Demand

A study of vehicle registration will frequently produce the number of vehicles registered to each category of user (resident students, non-resident students, etc.).

The car ownership ratio (COR) may be computed for each user classification through the following formula:

COR = <u>Total Population (Resident Student)</u> No. of vehicles registered (resident students)

The CORs developed for each user classification may be weighed and applied against population projections to compute future student parking demand.

An examination of the general trend of car ownership, using the past and present CORs for each category of parkers, will establish appropriate ratios for future years. It is expected that, with car ownership on the rise throughout the nation, and certainly with young people, these ratios will be no larger than the present CORs found and will probably be smaller. All future constraints should be taken into account. For instance, if the current administration's policy is not to build new dormitories and not to restrict enrollment, student enrollment increases will occur within the non-resident body. Therefore, very little, if any additional resident student parking will need to be provided. However, under these circumstances, non-resident student parking may quickly become critical.

30.00 Faculty-Staff Demand

The car ownership ratios for faculty and staff are used in conjunction with the maximum expected numbers of faculty and staff members on campus at any one time in order to determine the number of faculty-staff vehicles on campus. By using historical and current car ownership ratios, projections of the expected number of vehicles on campus, given the future number of faculty-staff members, can be made.

31.00 Turn-Over

The actual capacity of campus parking facilities must exceed the number of vehicles to be accommodated in order to permit turn-over of spaces between peak load periods only if the peak load periods occur back-to-back. In other words, if two peak load periods occur back-to-back, it would not be possible for sufficient parking spaces to be vacated and new vehicles accommodated within the time period available between classes.

32.00 Other Surface Development

A. Key Map

Provide a key map identifying significant surface development of campus land for other than buildings or automobile parking facilities. (example: paved courts for physical education, athletics, or recreation; grandstand; grass fields for physical education, athletics, or recreation; etc.) On smaller campuses, this key map may be combined with key maps for buildings and parking facilities. Identify each surface development included on the key map with the code number and use described in the inventory.

B. Each Facility

Provide adequate descriptions of each facility including use, size, condition, etc.

33.00 Information Technology Strategic Planning

Information technology (IT) can help institutions reach evolving goals and deliver academic, administrative, student, and institutional business services; provide learning and research tools and resources for students and faculty; and provide a technology foundation to enable intellectual exploration, discovery, and growth.

Academic and institutional goals should drive priority setting and investments for information technology decisions. In this context, every higher education governing board and institution should have meaningful IT planning processes in place. Linkages between information technology and academic program initiatives should be incorporated within the framework of the institutional facilities/infrastructure planning document.

A. Objectives

The objectives of information technology strategic planning are to ensure that appropriate resources are in place to support the institutions' roles and missions and that state, commission and system goals are achieved. Information technology planning enables governing boards and institutions to forecast areas in which new policy or funding initiatives are desirable.

B. Statutory Authority

23-1-108 C.R.S. provides general duties and powers of the commission with regard to systemwide planning, specifically, "(a) for the best use of available resources," which is interpreted to include IT resources.

23-13-104 C.R.S. provides statewide expectations and goals for higher education, including "(1) (d) technology integration to lower the institution's capital and administrative costs and improve the quality and delivery of education and provide effective stewardship of existing assets, recognizing that all technology changes may not result in lower costs in the academic arena. To meet this goal, each institution shall: (I) Integrate technology to reduce the institution's cost per unit of education; (II) Integrate technology to improve the marketability of graduates in the workplace; (III) Improve student access and continuing education through increased distance learning; (IV) Improve learning productivity."

34.00 Governing Board and Institutional Planning

Each higher education governing board shall ensure that all institutions under its authority have appropriate and meaningful information technology decision-making processes and that governing board planning priorities and criteria, as appropriate, are used. Such governing board decisions should guide institutional IT decisions for ensuring adequate and appropriate assets (infrastructure, technology, and applications) are in place with adequate support for their effective use.

A governing board's assessment of information technology needs within its system and for specific institutions should serve as the foundation for technology decision-making within program plans and the institutional facilities/infrastructure plan. The Commission encourages institutional updates to IT strategic plans when appropriate, but an update must be incorporated in the institutional facility/infrastructure plan when it is submitted for review.

IT strategic plans provide a context for individual initiatives and do not comprise detailed commitments.

IT strategic plans shall include high-level descriptions of key goals, strategies, initiatives, and resources required. Distance learning objectives shall be incorporated. Major initiatives identified in the strategic plan for investment will require additional detailed planning. An IT strategic plan shall provide information that is useful in understanding the context for any funding request to the institution, governing board, or the state.

35.00 Expected Elements of an IT Strategic Plan

The assessment shall provide the following information:

- 1. A summary of recent technology initiatives and accomplishments;
- 2. A summary of the current status of IT operations, initiatives, resources, and key issues;

- 3. A statement of major goals and objectives for Information Technology support and investments;
- 4. An assessment of distance learning progress and future objectives.
- 5. An assessment of strategic IT issues and barriers or obstacles to successfully fulfill academic or administrative goals;
- 6. A description of the proposed strategies for achieving the goals along with a statement of rationale; and
- 7. A financial summary keyed to the resources required to implement the initiatives.

36.00 Relationship of Information Technology Planning to Facility/Infrastructure Planning

Governing boards may continue to request state capital construction funding through the commission for it projects within the capital construction request process. Such requests shall be submitted in accordance with CCHE policy and guidelines for capital construction requests. All capital funding requests must cite a current IT strategic plan.